

02605.000030

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)		
	:	Examiner: M. Medley	RECEIVED
ANGELICA GOLUBKOV ET AL.)		
	:	Group Art Unit: 1714	JUN 18 2004
Application No.: 09/848,293)		
	:		OFFICE OF PETITIONS
Filed: May 4, 2001)		
	:		
For: MOTOR FUEL FOR DIESEL,)		
GAS-TURBINE AND TURBOJET	:		
ENGINES)	June 17, 2004	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THIRD INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. Copies of the listed documents are also enclosed.

This Information Disclosure Document is to submit FR 2 498 622, which was cited in a May 27, 2004 Office Action in a corresponding European Application. The concise explanation of relevance for this non-English document may be found, inter alia, in the attached English language abstract and/or in three Great Britain patent applications, which are in the same family as FR 2 498 622. Copies of these Great Britain patent applications are enclosed.

Applicants respectfully submit that FR 2 498 622 does not disclose or suggest a stable motor fuel composition comprising at least two oxygen-containing organic

compounds comprising in total at least four different oxygen-containing functional groups as presently claimed. Applicants submit that FR 2 498 622 teaches a diesel fuel, which can be combined with alcohols using fatty ester acids. In some instances, the alcohol mixture can contain acetone. In other instances, a nitrate cetane number improving agent can be added to the diesel fuel to further raise its cetane number.

Both acetone and the cetane improving agents are optional ingredients. There is no teaching that a fuel should or must contain an alcohol, acetone, a fatty acid ester and a nitrate to achieve a useful fuel composition.

FR 2 498 622 teaches that a fatty acid ester is used to achieve a better compatibility between an alcohol and diesel fuel. This document, however, does not disclose or suggest that adding any other compounds, such as acetone or a nitrate, results in any improvement in compatibility. In fact, FR 2 498 622 teaches that the esters alone are sufficient. Furthermore, as indicated in the English language abstract of FR 2 498 622, addition of an ester to the diesel fuel provides cetane numbers suitable for diesel engines.

Using an alcohol with acetone and a nitrate cetane number improving agent increases the cost of the composition. The costs are especially prohibitive in connection with nitrate cetane number improving agents. In addition to being very expensive, nitrate cetane number improving agents are well-known to be highly volatile and semi-explosive, which makes them difficult and undesirable to handle. Amyl nitrate mentioned in FR 2 498 622, for example, is known to be extremely dangerous to human health. Because it has often been abused with fatal results, amyl nitrate is a restricted compound. Importantly, amyl nitrate produces an undesirable smell upon combustion in a diesel engine.

Clearly, based on these well-known facts a person skilled in the art would not be motivated to add nitrate cetane number improving agents to fuel unless absolutely necessary. As discussed above, according to FR 2 498 622, cetane number improving

agents are not necessary, because FR 2 498 622 teaches that fuel with appropriate cetane numbers can be achieved by using only an alcohol component and an ester.

In the presently claimed invention, Applicants have found that an oxygen-containing component comprising at least two different compounds containing at least four different oxygen-containing functional groups is needed to achieve proper compatibility between diesel fuel and oxygen-containing compounds to produce a motor fuel composition, which is homogeneous, water-tolerant, burns evenly throughout the mixture, reduces harmful pollutants and can be produced from renewable resources. FR 2 498 622 fails to disclose either these or any other reasons for the need to use the presently claimed oxygen-containing compounds.

Furthermore, FR 2 498 622 fails to disclose or suggest a fuel comprising the presently claimed oxygen-containing compounds, which fuel has the properties:

- (i) density at 20°C of not less than 0.775 g/cm³;
- (ii) cloud temperature is not higher than 0°C at atmospheric pressure;
- (iii) stable at atmospheric pressure from a cloud temperature of -50°C to an initial boiling point of 180°C; and

- (iv) amounts of liquid evaporated by boiling at atmospheric pressure include:


- not more than 25% of the total volume of the motor fuel composition distills at temperatures no higher than 100°C;
- not more than 35 % of the total volume of the motor fuel composition distills at temperatures no higher than 150°C;
- not more than 50% of the total volume of motor fuel composition distills at temperatures no higher than 200°C ;
- not less than 98% of the total volume of the motor fuel composition distills at temperatures no higher than 400°C.

CONCLUSION

It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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